

REMARKS/ARGUMENTS

Claims 18-50, 57-62 and 67-75 are pending in this application. Claim 18 is an independent claim and the remaining claims ultimately depend from claim 18. The formula in claim 18 is amended herein to recite that R' can be O-Ar where Ar is an aryl group other than an aryl group that contains an alkyl portion. Support for this amendment can be found in paragraph 0087 of the specification as published, which states that aryl groups optionally may include alkyl portions. Because this subset of aryl groups is specifically described in the specification it can be excluded from the claims. Claims 18 and 21 are also amended to correct typographical errors. Claim 38 is amended to depend from claim 37 instead of claim 30. Claim 50 is amended to delete the phrase "or amino acid". Claim 57 is amended to delete the phrase "or protein". Claims 70 and 74 are canceled. The specification is also amended to insert SEQ ID NOs where appropriate.

Objections to the Specification

The Examiner objected to the specification for failing to include SEQ ID NOs after amino acid sequences. The specification is hereby amended to insert the appropriate SEQ ID NOs after amino acid sequences on page 39, lines 11, 21, 23 and 29, and page 43, line 3. The Sequence Listing is also amended to add two new sequences (SEQ ID NOs 4 and 5) which are variations of SEQ ID NOs 2 and 3. Support for SEQ ID NOs 4 and 5 can be found in the amino acid sequences on page 39, line 21, and page 43, line 3, respectively. Accompanying this response are substitute sheets to the Sequence Listing (in pdf and text file format). It is believed the accompanying Sequence Listing conforms to the sequence rules (37 CFR 1.821 – 1.825) and does not constitute new matter. The Sequence Listing in the pdf file and text file are the same.

Rejections under 35 USC 112

The Examiner rejected claims 50 and 57-62 under 35 USC 112, second paragraph, as being indefinite. The Examiner stated that the preamble of claim 50 recites a peptide or amino acid is to be synthesized but the sole method step in the

claim requires that only a peptide is to be synthesized. The Examiner also rejected claim 57, which depends from claim 50, for reciting “the peptide or protein” where “protein” is not part of claim 50. In order to advance prosecution, claim 50 is hereby amended to delete the term “or amino acid”, and claim 57 is hereby amended to delete the term “or protein”. In light of these amendments to claims 50 and 57, this rejection should be withdrawn.

The Examiner also objected to the claims due to certain informalities. Claim 18 contains an additional “an”, and claim 21 repeats Fmoc twice and contains a semicolon instead of a comma. Accordingly, claim 18 is amended to delete the unnecessary “an” and claim 21 is amended to delete “Fmoc;”. In light of these amendments, the Examiner’s objections should be withdrawn.

The Examiner also stated that claims 34 and 38, claims 69 and 70, and claims 73 and 74 are substantially identical to each other in scope. Claim 38 is hereby amended to depend from claim 37 as suggested by the Examiner, and claims 70 and 74 are canceled.

Rejections in light of the Young PhD Thesis

The Examiner stated that the instant claims are not entitled to the benefit of the filing date of provisional application 60/396,832 because the provisional application does not disclose an R’ group that is N-hydroxysuccinimido. As a result, the Examiner stated that the Young PhD thesis is available as prior art and rejected the claims under 35 USC 102(b) and 35 USC 103(a) in light of the Young PhD thesis. Applicants respectfully traverse.

Claim 18 of the present application states that R’ can be N-hydroxysuccinimido. Support for this claim can be found in the general formula disclosed in the specification (paragraphs 0037 - 0052 of the published application), which states that R’ can be O-R”. The formula further states that R” can be, among other things, a succinimido group

(bottom of paragraph 0052 of the published application). Applicants submit that that N-hydroxysuccinimido is the resulting group when R' is O-R'' and R'' is succinimido.

This same language is present in provisional application 60/396,832 on pages 6 and 7. The general formula given on page 7 of the provisional application states that R' can be O-R'' (line 8). Page 7, lines 14 - 17, further states that R'' can be succinimido (line 17 specifically recites "succinimido"). When R' is O-R'' and R'' is succinimido, the resulting group will be N-hydroxysuccinimido. Additionally, claim 17 of the provisional application states that R' can be a succinimido group (page 24, line 18). Accordingly, applicants submit that N-hydroxysuccinimido at the R' position as recited in claim 18 is disclosed in the provisional application and satisfies the provisions of 35 USC 112. Therefore, the present claims are entitled to the benefit of the filing date of provisional application 60/396,832, and the Young PhD thesis is not available as prior art against these claims under 35 USC 102(b).

Additionally, attached are declarations under 37 CFR 1.132 by applicants Travis G. Young and Laura L. Kiessling stating that subject matter described in the Young PhD thesis was the work of both applicants and represents subject matter claimed in the present invention. The Young PhD thesis is authored by one of the co-inventors, Travis G. Young. The other co-inventor, Laura L. Kiessling, was his PhD advisor. It is common practice in the art to list a PhD candidate as the single author on their thesis even if others contributed to or co-invented subject matter described in the thesis. The attached declarations confirm that even though only one of the co-inventors (Travis G. Young) is listed as the author, the Young PhD thesis describes subject matter co-invented by both Travis G. Young and Laura L. Kiessling. These declarations establish that the Young PhD thesis describes the applicants' own invention and therefore is not available as a prior art reference under 35 USC 102(a) (see MPEP 715.01 and 2132).

Since the Young PhD thesis is not available as a reference under 35 USC 102(a), 102(b) or any other provision under 35 USC 102, the rejections under 35 USC 102 and 35 USC 103 in light of the Young PhD thesis should be withdrawn.

Rejections in light of Brooks et al.

The Examiner also rejected claims 18, 19, 21, 22, 67, 68 and 75 under 35 USC 102(a) and (e) as being anticipated by Brooks et al. (US Patent No. 6,500,924).

Claim 18 is hereby amended to recite that R' can be O-Ar, where Ar is an aryl group other than an aryl group that contains an alkyl portion. The amended claims exclude compounds where the O-Ar of R' contains an alkyl portion, which specifically excludes R' that is O-benzyl. Brooks et al. does not anticipate the claims as amended. Furthermore, there is no teaching or suggestion in Brooks et al. to modify any of the compounds described therein to fall within the scope of the amended claims. Accordingly, the rejections under 35 USC 102(b) should be withdrawn.

The Examiner also rejected claims 30, 31, 33, 34 38, 45 and 49 under 35 USC 103(a) as being obvious over Brooks et al. Claims 30, 31, 33, 34 38, 45 and 49 depend from claim 18 and are drawn to kits for the synthesis of modified peptides. The Examiner stated that it would have been obvious to package the reagents of Brooks et al., such as compound 3, in a kit to arrive at the present claims. To establish a prima facie case of obviousness, there must be some suggestion or motivation to combine or adapt the references; a reasonable expectation of success; and the final combination must teach or suggest all of the claim limitations (MPEP 2142). In light of the amendment to claim 18, none of the compounds disclosed by Brooks et al. falls within the scope of the claims. Even if one skilled in the art were to make kits containing reagents of Brooks et al., these kits would not meet every limitation in the current claims. Accordingly, the rejections under 35 USC 103(a) should be withdrawn.

Conclusion

In view of the foregoing, it is submitted that this case is in condition for allowance, and passage to issuance is respectfully requested. If there are further issues related to patentability, the courtesy of a telephone interview is requested, and the Examiner is invited to call to arrange a mutually convenient time.

This Amendment is accompanied by declarations under 37 CFR 1.132 by the Applicants, a Petition of Extension of Time for two months, and the requisite fees in the amount of \$225.00. If this is incorrect, please deduct from Deposit Account No. 07-1969 the appropriate fee for this submission and any extension of time required.

Respectfully submitted,
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